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INFORMATION DISCLOSURE STATEMENT BY APPLICANT  
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Applicants: Douglas Werner et al.

Filing Date: January 29, 2004

Group Art Unit: 3753

(37 CFR § 1.98(b))

## FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS

		Document Number	Publication Date	Country / Patent Office	Class	Subclass	Translation	
							Yes	No
TJW	AA	97212126.9	03/04/97	CN	BO1D	61/42		X
TJW	AB	2000-277540	10/06/00	JP	H01L	21/50		X

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TJW	AC	Stephen C. Jacobson et al., "Fused Quartz Substrates for Microchip Electrophoresis", Analytical Chemistry, Vo. 67, No. 13, July 1, 1995, pages 2059-2063.						
TJW	AD	Kendra V. Sharp et al., "Liquid Flows in Microchannels", 2002, Vol. 6, pages 6-1 to 6-38.						
TJW	AE	Shuchi Shoji et al., "Microflow devices and systems", J. Microtech. Microeng. 4 (1994), pages 157-171, printed in the U.K.						
TJW	AF	Angela Rasmussen et al., "Fabrication Techniques to Realize CMOS-Compatible Microfluidic Microchannels", Journal of Microelectromechanical, Vol. 10, No. 2, June 2001, pages 286-297.						
TJW	AG	J. H. Wang et al., "Thermal-Hydraulic Characteristic of Micro Heat Exchangers", 1991, DSC-Vol. 32, Micromechanical Sensors, Actuators, and Systems, pages 331-339.						
TJW	AH	Gad Hetsroni et al., "Nonuniform Temperature Distribution in Electronic Devices Cooled by Flow in Parallel Microchannels", IEEE Transactions on Components and Packaging Technologies, March 2001, Vol. 24, No. 1, pages 16-23.						
TJW	AI	X. F. Peng et al., "Heat Transfer Characteristics of Water Flowing through Microchannels", Experimental Heat Transfer An International Journal, Vol. 7, No. 4, October-December 1994, pages 265-283.						
TJW	AJ	Linan Jiang et al., "Forced Convection Boiling in a Microchannel Heat Sink", Journal of Microelectromechanical Systems, Vol. 10, No. 1, March 2001, pages 80-87.						
TJW	AK	Muhammad M. Rahman et al., "Experimental Measurements of Fluid Flow and Heat Transfer in Microchannel Cooling Passages in a Chip Substrate", 1993, EEP-Vol. 4-2, Advances in Electronic Packages, pages 685-692.						
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TJW	AM	Lung-Jieh Yang et al., "A Micro Fluidic System of Micro Channels with On-Site Sensors by Silicon Bulk Micromaching", September 1999, Microfluidic Devices and Systems II, Vol. 3877, pages 267-272.						
TJW	AN	G. Mohjuddin Mala et al., "Heat transfer and fluid flow in microchannels", 1997, Int. J. Mass transfer, Vol. 40, No. 13, pages 3079-3088, printed in Great Britain.						
TJW	AO	J. M. Cuta et al., "Fabrication and Testing of Micro-Channel Heat Exchangers", SPIE Microlithography and Metrology in Micromaching, Vol. 2640, 1995, pages 152-160.						
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TJW	AS	Yongendra Joshi, "Heat out of small packages", December 2001, Mechanical Engineer, pages 56-58.						
TJW	AT	A. Rostami et al., "Liquid Flow and Heat Transfer in Microchannels: a Review", 2000, Heat and Technology, Vol. 18, No. 2, pages 59-68.						
TJW	AU	Lian Zhang et al., "Measurements and Modeling of Two-Phase Flow in Microchannels with Nearly Constant Heat Flux Boundary Conditions", Journal of Microelectromechanical Systems, Vol. 11, No. 1, February 2002, pages 12-19.						
TJW	AV	Muhammad Mustafizur Rahman, "Measurements of Heat Transfer in Microchannel Heat Sinks", Int. Comm. Heat Mass Transfer, Vol. 27, No. 4, May 2000, pages 495-506.						
TJW	AW	Issam Mudawar et al., "Enhancement of Critical Heat Flux from High Power Microelectronic Heat Sources in a Flow Channel", Journal of Electronic Packaging, September 1990, Vol. 112, pages 241-248.						
TJW	AX	Nelson Kuan, "Experimental Evaluation of Micro Heat Exchangers Fabricated in Silicon", 1996, HTD-Vol. 331, National Heat Transfer Conference, Vol. 9, pages 131-136.						
TJW	AY	E. W. Kreutz et al., "Simulation of micro-channel heat sinks for optoelectronic microsystems", Microelectronics Journal 31(2000) pages 787-790.						
TJW	AZ	J. C. Y. Koh et al., "Heat Transfer of Microstructure for Integrated Circuits", 1986, Int. Comm. Heat Mass Transfer, Vol. 13, pages 89-98.						
TJW	BA	Snezana Konecni et al., "Convection Cooling of Microelectronic Chips", 1992, InterSociety Conference on Thermal Phenomena, pages 138-144.						

Examiner:

J. M. Wallberg

Date Considered:

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## OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)

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TJW	BC	Jerry K. Keska Ph. D. et al., "An Experimental Study on an Enhanced Microchannel Heat Sink for Microelectronics Applications", EEP-Vol. 26-2, Advances in Electronic Packaging, 1999, Vol. 2, pages 1235-1259.
TJW	BD	Shung-Wen Kang et al., "The Performance Test and Analysis of Silicon-Based Microchannel Heat Sink", July 1999, Terahertz and Gigahertz Photonics, Vol. 3795, pages 259-270.
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TJW	BF	Sarah Arulanandam et al., "Liquid transport in rectangular microchannels by electroosmotic pumping", Colloid and Surfaces A: Physicochemical and Engineering Aspects 161 (2000), pages 89-102.
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TJW	BI	John M. Waldvogel, "Aluminum Silicon Carbide Phase Change Heat Spreader", Motorola, June 1999, Technical Developments, pages 226-230.
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TJW	BO	"Integrally Grooved Semiconductor Chip and Heat Sink", October 1971, IBM Technical Disclosure Bulletin, Vol. 14, No. 5, page 1425.
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TJW	BV	"Chip Cooling Device", IBM Technical Disclosure Bulletin, Vol. 30, No. 9, February 1988, pages 435-436.
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Examiner:

J. M. Walther

Date Considered:

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FORM PTO-1449 (Modified)		U.S. Department of Commerce Patent and Trademark Office		Attorney Docket No.: COOL-02100		Serial No.: 10/769,717	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets if Necessary)				Applicants: Douglas Werner et al.			
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OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)							
TJW	CE	R. C. Chu et al., "Silicon Heat Sink for Semiconductor Chip", IBM Technical Disclosure Bulletin, Vol. 24, No. 11A, April 1982, page 5743.					
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TJW	CG	J. R. Skobem, "Thermoelectrically Cooled Module", IBM Technical Disclosure Bulletin, Vol. 27, No. 1A, June 1984, page 30.					
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TW	DK	V. Y. Doo et al., "Method of Effective Cooling of a High Power Silicon Chip", IBM Technical Disclosure Bulletin, Vol. 20, No. 4, September 1977, page 1436-1437.		
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TJW	FB	Mali Mahalingam, <u>Thermal Management in Semiconductor Device Packaging</u> , 1985, Proceedings of the IEEE, Vol. 73, No. 9, September 1985, pages 1396-1404.			
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EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.					

FORM PTO-1449  
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Patent and Trademark Office

Attorney Docket No.: COOL-02100

Serial No.: 10/769,717

INFORMATION DISCLOSURE STATEMENT BY APPLICANT  
(Use Several Sheets If Necessary)

Applicants: Douglas Werner et al.

Filing Date: January 29, 2004

Group Art Unit: 3753

(37 CFR § 1.98(b))

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Examiner:

*D. W. Matherly*

Date Considered:

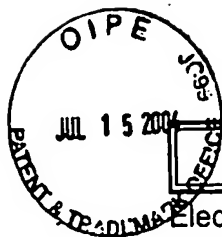
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FORM PTO-1449 (Modified)		U.S. Department of Commerce Patent and Trademark Office		Attorney Docket No.: COOL-02100		Serial No.: 10/769,717	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets If Necessary)				Applicants: Douglas Werner et al.			
				Filing Date: January 29, 2004		Group Art Unit: 3753	
(37 CFR § 1.98(b))							
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Examiner: <i>J. Walther</i>				Date Considered: <i>1/19/05</i>			
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# ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18  
Stylesheet Version v18.0

Title of  
Invention:

HERMETIC CLOSED LOOP FLUID SYSTEM

Application Number: 10/769717  
Confirmation Number: 8804  
First Named Applicant: Douglas Werner  
Attorney Docket Number:



Search string: ( 5759014 or 5763951 or 5800690 or 5801442  
or 5835345 or 5836750 or 5858188 or 5863708  
or 5869004 or 5870823 or 5874795 or 5876655  
or 5880017 or 5880524 or 5936192 or 5940270  
or 5942093 or 5964092 or 5965001 or 5965813  
or 5978220 or 5997713 or 5998240 or 6007309  
or 6010316 or 6013164 or 6019882 or 6068752  
or 6090251 or 6096656 or 6100541 or 6101715  
or 6119729 or 6126723 or 6129145 or 6131650  
or 6146103 or 6154363 or 6159353 or 6171067  
or 6174675 or 6176962 or 6186660 or 6210986  
or 6216343 or 6221226 or 6227809 or 6277257  
or 6287440 or 6301109 ).pn.

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Note: Applicant is not required to submit a paper copy of cited US Patent Documents

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<i>DW</i>	2	5763951	1998-06-09	Hamilton et al.			
<i>DW</i>	3	5800690	1998-09-01	Chow et al.			
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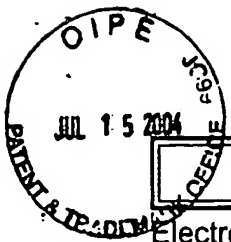


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Signature

Examiner Name	Date
<i>D. Walberg</i>	<i>1/19/05</i>



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Electronic Version v18

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Title of  
Invention

HERMETIC CLOSED LOOP FLUID SYSTEM

Application Number: 10/769717



Confirmation Number: 8804

First Named Applicant: Douglas Werner

Attorney Docket Number:

Search string: ( 6313992 or 6317326 or 6321791 or 6322753  
or 6324058 or 6351384 or 6337794 or 6388317  
or 6400012 or 6406605 or 6415860 or 6416642  
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or 20010055714 or 20020011330 ).pn.

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Note: Applicant is not required to submit a paper copy of cited US Patent Documents

init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
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DW	2	6317326	2001-11-13	Vogel et al.	B1		
DW	3	6321791	2001-11-27	Chow	B1		
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Note: Applicant is not required to submit a paper copy of cited US Published Applications

init	Cite.No.	Pub. No.	Date	Applicant	Kind	Class	Subclass
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TW	2	20010024820	2001-09-27	Mastromatteo et al.	A1		
TW	3	20010044155	2001-11-22	Paul et al.	A1		
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TW	6	20010055714	2001-12-27	Cettour-Rose et al.	A1		
TW	7	20020011330	2002-01-31	Insley et al.	A1		

Signature

Examiner Name	Date
<i>DM Kollberg</i>	<i>1/19/05</i>